

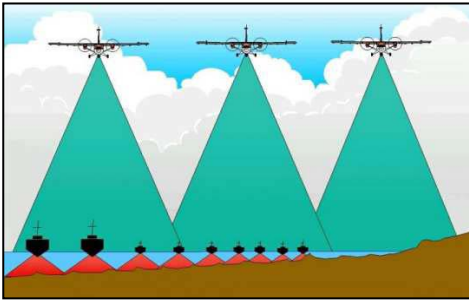
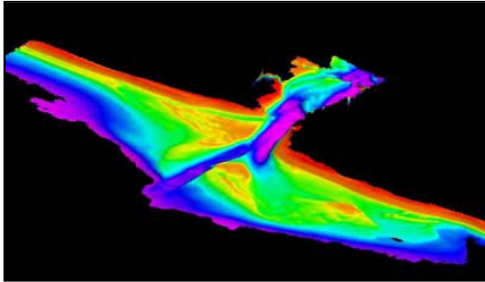
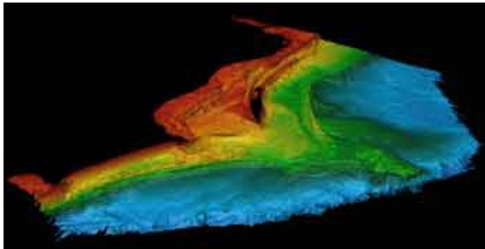
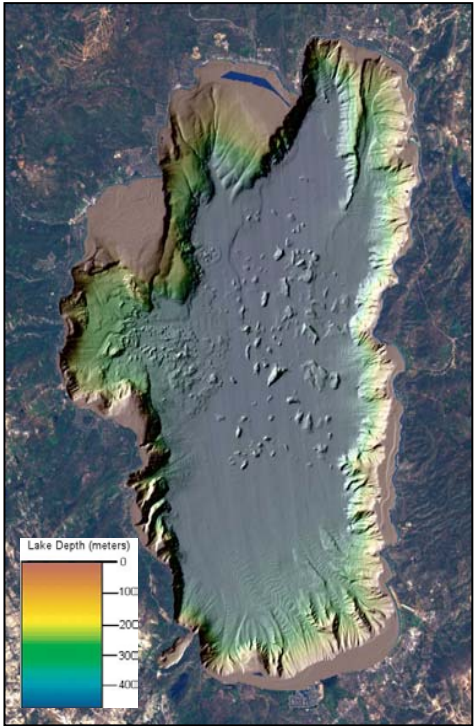




## Summary View of Hydrographic LIDAR Survey Technique



Application	Data Coverage	Resolution			Key Points
		Vertical	Horizontal	Image	
Bathymetry	Several km	cm	m	cm	<ul style="list-style-type: none"> <li>Point Dataset, very dense data</li> <li>Measurement of water depth using a laser but highly dependent on water clarity</li> <li>Collection of data possible in challenging areas; shallow water, boat hazards, and so forth</li> <li>Cost-effective in shallow areas in support of acoustic data</li> </ul>
Data Collection <sup>1</sup>				Raw Data <sup>1</sup>	Processed Data <sup>2</sup>
   <p>Aircraft-deployed LIDAR equipment can collect more nearshore and shallow-water data than boat-deployed sonar equipment.</p>				 <p>New Pass, Florida was one of the first locations surveyed by the SHOALS Hydrographic LIDAR system. The survey was conducted in March 1994.</p>  <p>In early 1996, SHOALS performed its first international mission offshore of Cancun, Mexico to chart the waters and identify any potential navigation hazards.</p>	 <p>Lake Tahoe Bathymetry. Shaded relief image of combined LIDAR and multibeam bathymetry over Landsat-7 imagery (surrounding land).</p>

<sup>1</sup>Data collection images obtained from USACE SHOALS (<http://shoals.sam.usace.army.mil>).

<sup>2</sup>Processed data imagery obtained from USGS Western Region Coastal and Marine Geology (<http://walrus.wr.usgs.gov/pacmaps/lt-shoal.html>). USACE SHOALS LIDAR Survey of Lake Tahoe.